

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method of fuel cell start-up for a fuel cell system having a hydrogen source connected to an anode inlet of a fuel cell stack and an oxygen source connected to a cathode inlet of the fuel cell stack, the cathode inlet being connected to a compressor, ~~the fuel cell stack being purged of hydrogen prior to start-up~~, the method comprising the steps of:

purging hydrogen from the fuel cell stack with air prior to startup;

introducing hydrogen to the anode inlet of the fuel cell stack;

determining an amount of electrical power generated by the fuel cell stack with an electronic controller;

applying an electrical load to the fuel cell stack via the compressor for supplying additional oxygen to the cathode inlet based on said electrical power generated by the fuel cell stack; and

gradually increasing the said electrical load ~~to on~~ the fuel cell stack over time while using the said increased electrical ~~load~~ power generated to drive the compressor to supply additional oxygen to the cathode inlet.

2. (Currently Amended) The method according to claim 1, wherein ~~the~~ said step of introducing hydrogen to the anode inlet includes opening a valve to release hydrogen flow to the anode inlet.

3. (Original) The method according to claim 2, wherein said valve is opened manually.

4. (Original) The method according to claim 2, wherein said valve is opened by an electronic solenoid.

5. (Currently Amended) The method according to claim 1, wherein said step of gradually increasing ~~the~~ said electrical load ~~to~~ on the fuel cell stack is performed by ~~an~~ said electronic controller ~~for monitoring cell voltages of the fuel cell stack and commanding a compressor motor to load the fuel cell stack and to increase the load on the fuel cell stack as the cell voltages of the fuel cell stack increase.~~

6. (Currently Amended) The method according to claim 1, wherein said step of gradually increasing the said electrical load to the fuel cell stack is performed until the fuel cell stack produces enough electrical power to operate at a positive net power.

7. (Currently Amended) The method according to claim 1, wherein said step of gradually increasing ~~the~~ said electrical load to the fuel cell stack is performed on an open loop basis according to a timed schedule.

8. (Currently Amended) The method according to claim 1, further comprising ~~the~~ said step of releasing a stored oxygen source into the cathode inlet after ~~the~~ said step of introducing hydrogen to the anode inlet.

9. (Currently Amended) The method according to claim 1, further comprising ~~the~~ said step of releasing a pressurized gas into a passage upstream of the cathode inlet for forcing oxygen in said passage into said fuel cell stack.

10. (Original) The method according to claim 9, wherein said pressurized gas is provided from a burp valve provided in an anode exhaust passage of the fuel cell stack.

11. (New) The method according to claim 5, wherein said electronic controller monitors cell voltages of the fuel cell stack and commands a compressor motor to load the fuel cell stack and to increase said load on the fuel cell stack as said cell voltages of the fuel cell stack increase.